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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,823	01/24/2001	Kurt R. Zimmerman	A-68861/AJT/LM	5178

7590 01/31/2002

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EXAMINER

ISSING, GREGORY C

ART UNIT PAPER NUMBER

3662

DATE MAILED: 01/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/769,823	Applicant(s) ZIMMERMAN ET AL.	
	Examiner Gregory C. Issing	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>8</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the specification describes "multi-frequency pseudolite system 7". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The disclosure is objected to because of the following informalities: starting on page 11, line 20, of the specification the identified terminology is consistently in error with regard to "GPS receivers 305". The specification describes both the receivers and the navigation processors as "305". The language on page 15, lines 25-26 makes no sense, particularly, "these are time differential carrier phases and the time bias is between the mobile receiver and true time". It is not clear to what "these" refers and it is unclear how there is a bias between a receiver, ie a hardware element, time, ie. a measured quantity. still

Appropriate correction is required.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 10 is non-enabling with respect to determining ambiguities based on "the preserved and observed time and phase alignment between the code and carrier portions of the transmitted multi-frequency pseudolite signals".

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4. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The parenthetical expressions are objected to since they make the claims indefinite; it is unclear if the parenthetical expressions are suggestive of limiting features.

In claim 5, the language "a multifrequency **receiver** comprising . . . **multiple GPS receivers**" is contradictory.

The scope of claim 6 is not ascertainable; the language "on respective different frequencies that are not a predetermined frequency to the predetermined frequency" makes no sense whatsoever. The use of two periods to conclude the sentence is incorrect.

Claim 8 is written in such a poor fashion as to be unable to determine the scope of the claim. Additionally, the terms, "the code and carrier phase relationships", "the signals" and "the pseudolites" lack proper antecedent bases.

Claim 9 is indefinite for failing to clearly and distinctly set forth subject matter which applicant regards as the invention. It is unclear if this claim is supposed to be a dependent claim or independent claim since there is no reference to any other claim nor are the elements properly referred to. The language is grammatically incorrect.

Claim 10 is indefinite for failing to clearly and distinctly set forth the subject matter. The claim is replete with terminology have improper antecedent bases.

Since the claim language is so poorly written and the scope of the claims is not properly ascertainable, an action on the merits cannot be performed.

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5. The claims appear to be describing several distinct elements including a pseudolite transmitter, a multifrequency receiver, system comprising a datalink between a reference receiver and a mobile receiver, and a process for determining carrier ambiguity. In drafting new claim language to clearly and distinctly set forth the invention, applicants should direct the claim language to a single inventive concept. In view of the indefiniteness and non-clarity of the claims at present, a restriction requirement is not being presently made. However, if claims are maintained within each of the above identified subject matter, a restriction will be required in the next Office Action.

6. The following prior art is considered pertinent to the disclosed subject matter: Mosyakov et al disclose a position determining system using a multifrequency transmitter and a multifrequency receiver; Lennen disclose a multifrequency receiver; Bogensbereger et al disclose a multifrequency receiver; Longaker et al disclose a position determining system using pseudolites wherein a receiver is capable of receiving signals from GPS satellites, ground stations and a base station wherein the various links may incorporate any of a variety of well-known communication links; Hanson et al disclose a multifrequency receiver; Flood et al, Spence et al and Kramer disclose systems having a multifrequency transmitter and multifrequency receiver.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (703)-306-4156. The examiner can normally be reached on Mon-Thurs 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (703)-306-4171. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703)-305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


Gregory C. Issing
Primary Examiner
Art Unit 3662

gci
January 28, 2002